

CLAIMS:

1. An apparatus adapted for confocal imaging of a non-flat specimen, said apparatus having an optical axis and a predetermined lateral resolution and comprising a coherent light source for producing a light beam, imaging optics
5 adapted to focus the light beam into at least one spot on a surface of a specimen, and a detector having an integration time and adapted to receive and detect light reflected from said surface; said imaging optics comprising at least one optical component located so that the light reflected from the specimen surface passes therethrough on its way to the detector, said optical component being movable so
10 as to move the at least one spot, within a range of movement, to a number of distinct locations in a plane perpendicular to the optical axis, within said integration time of the detector.
2. The apparatus according to Claim 1, wherein the moving optical component is an objective lens.
- 15 3. The apparatus according to Claim 2, wherein the objective lens is adapted to move circularly about the optical axis.
4. The apparatus according to Claim 1, wherein the moving optical component is a reflecting optical element.
5. The apparatus according to Claim 4, wherein the reflecting optical
20 element is designed to move on dual axes.
6. The apparatus according to Claim 1, wherein the moving optical component is a non-imaging optical element.
7. The apparatus according to Claim 6, wherein the moving optical component is a generally wedge-shaped transparent component.
- 25 8. The apparatus according to Claim 7, wherein the transparent component is made of glass.
9. The apparatus according to Claim 7, wherein the transparent component is rotatable about the optical axis of the apparatus.

10. The apparatus according to Claim 1, wherein the moving optical component is designed to produce a circular spot pattern on the specimen.
11. The apparatus according to Claim 1, wherein the light beam is composed of an array of light beams.
- 5 12. The apparatus according to Claim 1, wherein the apparatus further comprises a beam-splitter.
13. A method for confocal imaging of a non-flat specimen, the method comprising:
- providing an apparatus comprising a source of coherent light and a
- 10 detector;
- focusing the coherent light into at least one spot on a surface of the specimen by means of imaging optics comprising a movable optical component;
- directing light reflected by the surface toward the detector via the movable optical component;
- 15 detecting the light by the detector; and
- moving the movable optical component so as to move the at least one spot to a number of distinct locations within the integration time of the detector.
14. A method according to Claim 13, wherein the movable optical component moves on dual axes.
- 20 15. A method according to Claim 13, wherein the movable optical component rotates about an optical axis of the apparatus.
16. A method according to Claim 13, wherein the movable optical component produces a circular spot pattern on the specimen.